

REMARKS/ARGUMENTS

Claims 1, 2, and 8 – 26 are currently pending. Claims 3 – 7 were canceled in a previous Amendment.

Independent claims 1 and 15 have been amended to clarify that the “input optical fiber” is mounted upon the substrate. The mounting arrangement is shown in the embodiments in Figures 1 and 2, and further supported in the application at page 4, lines 7 - 10.

Claims 1, 2, and 8 – 26 are rejected under 35 U.S.C. §102(b) or §103(a) over U.S. Patent No. 5,481,629 to Tabuchi (hereinafter, “Tabuchi”), or over Tabuchi in view of U.S. Patent No. 5,999,303 to Drake (hereinafter, Drake”) (claim 19) or over Tabuchi in view of U.S. Patent No. 5,787, 214 to Harpin, et al. (hereinafter, “Harpin”) (claim 20).

Independent claim 1 now recites, in part, “A mounting arrangement...comprising:

a substrate,

an input optical fiber **mounted on said substrate**,

an output optical waveguide in a given set of planar layer of said substrate,

said one optical component is mounted on said substrate to transmit optical

radiation from said input optical fiber to said output optical waveguide, and

a further optical waveguide is disposed on said substrate in the same planar layers of said output optical waveguide wherein said output optical waveguide and said further optical waveguide are aligned along an input-to-output propagation path, thereby

providing substantial alignment of said output optical waveguide and said further optical waveguide, said further optical waveguide is interposed between said input optical fiber and said optical component and wherein said optical component is interposed between said further optical waveguide and said output optical waveguide.” [emphasis added].

Tabuchi discloses an integrated optical device having an **optical semiconductor device 8** which is bonded on a “**bonding pedestal**” (col. 6, lines 36 – 38), so that the optical semiconductor device is at a **position higher** than a core region 4 of waveguide 20 (col. 6, lines 41 – 42) [emphasis added]. All of the embodiments described in Tabuchi have the optical semiconductor device 8 on a pedestal, rather than mounted directly on with substrate 1. This can be seen most clearly in Figures 3H – 3J, but also in Figure 6, where 8d and 8e are positioned atop pedestal 20a, as well as Figure 2A, where semiconductor 8 is atop a pedestal of 2, 3 and 4. Likewise, Tabuchi discloses an **optical fiber 9** that is positioned **above, but not mounted on**, substrate 1, which is seen most clearly in Figure 1 and in Figure 3I.

In contrast, claim 1 recites an input optical fiber that is mounted on the substrate. This feature is neither disclosed nor suggested by Tabuchi.

In addition, in each of the embodiments disclosed in Tabuchi, the semiconductor device 8 is a semiconductor laser that emits optical radiation. Radiation is coupled from the semiconductor laser to the optical fiber – therefore, the “optical fiber” 9 in Tabuchi actually corresponds to an “output” optical fiber. Thus, Tabuchi does not disclose or suggest that “a further optical waveguide is disposed on the substrate **in the same planar layers of the output**

optical waveguide, wherein the output optical waveguide and the further optical waveguide are aligned along an input-to-output propagation path, thereby providing **substantial alignment of the output optical waveguide and the further optical waveguide**,” that is recited in claim 1. Instead, because of the difference in heights between the semiconductor device 8 and optical fiber 9, Tabuchi discloses spherical lenses 10, 11, as well as optical member 12 to displace the optical axis “by an amount equal to the difference in heights” (col. 6, lines 44 – 48).

For an anticipation rejection to be proper, “the identical invention must be shown in as complete detail as is contained in the ...claim” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236; 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applying this principle to the present matter, Tabuchi does not show the identical invention in complete detail as recited in claim 1.

Therefore, Tabuchi does not anticipate all of the features of claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the §102 rejection to claim 1.

Likewise, for at least the reasons discussed for independent claim 1, above, dependent claims 2 and 8 – 14 are not anticipated by Tabuchi.

Independent claim 15 recites, “A mounting arrangement for at least one optical component in a planar lightwave circuit, the arrangement comprising:

a substrate,

an input optical fiber **mounted on said substrate**,

an output optical waveguide in a given set of planar layers of said substrate,

said optical component is mounted on said substrate to transmit optical radiation from said input optical fiber to said output optical waveguide, and

a further optical fiber associated with said substrate between said optical component and said output optical waveguide so that said optical component is interposed between said input optical fiber and said further optical fiber.” [emphasis added].

As discussed above for independent claim 1, Tabuchi does not disclose an input optical fiber that is **mounted on the substrate**. Instead, Tabuchi discloses an integrated optical device having an optical semiconductor device 8 which is placed on a “bonding pedestal” (col. 6, lines 36 – 38), such that the optical semiconductor device is at a position higher than a core region 4 of waveguide 20 (col. 6, lines 41 – 42; Figs. 3H – 3J, 6). Tabuchi also discloses an “optical fiber” 9 that is positioned above, but not mounted on, substrate 1, as shown most clearly in Figure 1 and in Figure 3I. Tabuchi discloses spherical lenses 10, 11 and optical member 12 are disclosed by Tabuchi to displace the optical axis “by an amount equal to the difference in heights” [between semiconductor device 8 and optical fiber 9](col. 6, lines 44 – 48).

Claim 15 recites an input optical fiber that is mounted on the substrate. This feature is neither disclosed nor suggested by Tabuchi, which discloses embodiments where optical semiconductor device 8 and optical fiber 9 are not directly mounted on substrate 1.

Nor does Tabuchi disclose or suggest a “further optical fiber associated with said substrate between said optical component and said output optical waveguide so that said optical component is interposed between said input optical fiber and said further optical fiber,” that is recited in claim 15.

Therefore, Tabuchi does not disclose all of the features of claim 15. Accordingly, Applicants request reconsideration and withdrawal of the §102 rejection to claim 15.

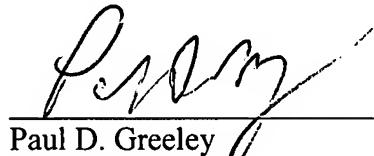
Secondary references Drake (for claim 19) and Harpin (for claim 20) are not asserted by the Office Action as disclosing or suggesting an input optical fiber mounted on the substrate, nor a further optical waveguide [that] is disposed on the substrate in the same planar layers of the output optical waveguide as claimed. Therefore, even the combination of Tabuchi with Drake or Harpin does not disclose or suggest the features of dependent claims 19 or 20, respectively. Accordingly, Applicants request reconsideration and withdrawal of the §103 rejections to claims 19 and 20.

Therefore, for at least the reasons above, independent claim 15 and its dependent claims 16 – 26 are patentable over Tabuchi, alone or in combination with Drake or Harpin.

In view of the above amendments and remarks, Applicants respectfully submit that claims 1, 2, and 8 – 26 are allowable over the cited art, taken alone or in combination, and earnestly solicit reconsideration and withdrawal of all pending rejections and issuance of a Notice of Allowance.

In the alternative, Applicants submit that the instant Amendment places the application in better condition for appeal. Accordingly, entry and consideration of the Amendment are respectfully requested.

Respectfully submitted,



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